

# PATENT ABSTRACTS OF JAPAN

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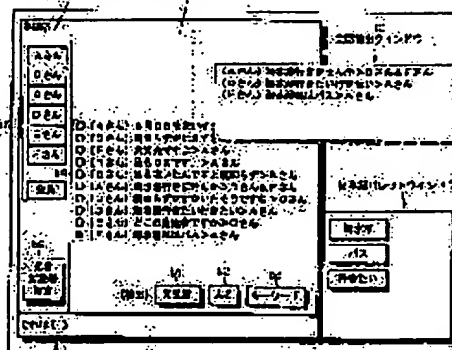
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## (54) REAL-TIME CHAT SYSTEM

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To effectively extract only the conversations that are related to a designated keyword by extracting the speech information including the keyword from all speech information and showing the extracted information on a display device.

**SOLUTION:** A main window 11 consists of a participant display panel 11a which shows the chat participants, a conversation input panel 11b which inputs the conversations via a character input device and a conversation display panel 11c. Then a conversation extraction window 12 appears when a user selects a keyword. The keyword is selected from the speeches and a keyword button b3 is pushed, and a participant name is selected from a participant button group b5 of the panel 11a and a person name button b2 is pushed. A speech is selected by designating a certain button from a speech designation button group b4 which is shown at the head of each speech. Then an original speech button b1 is pushed. Thus, the corresponding conversation is extracted in the said three ways.



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**CLAIMS**


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**[Claim(s)]**

**[Claim 1]** The real-time chat system characterized by what the utterance information containing the specified keyword is extracted and is displayed on display out of utterance information in the real-time chat system in which the real-time chat by two or more speakers who used information machines and equipment is possible.

**[Claim 2]** The aforementioned utterance information is a speaker's identification information, the identification information of the utterance candidate set as the object of an utterance, and a real-time chat system according to claim 1 characterized by the bird clapper including the contents of an utterance inputted.

**[Claim 3]** The real-time chat system according to claim 1 or 2 characterized by using a speaker's identification information for the aforementioned keyword.

**[Claim 4]** The claim 1 characterized by extracting the related utterance information which determined the identification information of the speaker who has this identification information and common identification information as the aforementioned keyword based on an utterance candidate's identification information in the specified utterance information, and became the origin of an utterance, or a real-time chat system given [ any 1 ] in three.

**[Claim 5]** The claim 1 characterized by making an input possible by making identification information chosen by displaying a speaker's identification information on display and choosing the displayed identification information arbitrarily into the aforementioned utterance information, or a real-time chat system given [ any 1 ] in four.

**[Claim 6]** The claim 1 characterized by enabling specification of the aforementioned keyword by registering either or the plurality of the high frequency appearance phrase in the extracted utterance information, the homonymy phrase of a high frequency appearance phrase, and the opposite phrase of a high frequency appearance phrase into a dictionary means or a display button, and using this dictionary means or a display button, or a real-time chat system given [ any 1 ] in five.

**[Claim 7]** The record medium which memorized the program for performing the function of a claim 1 or a real-time chat system given [ any 1 ] in six and in which a computer readout is possible.

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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to the real-time chat system which connects between information machines and equipment and holds remote conversation by a lot of people.

[0002]

[Description of the Prior Art] In the network system using computers, such as personal computer communications, the real-time chat system has been offered as service for many years. Although this real-time chat system was only a text-based thing, in recent years, the thing of the method which can do conversation with the thing and voice of the method using ABATA in 3D space has also appeared at the beginning. However, a traditional text-based real-time chat system also has the goodness of the response at the time of using it by the abundant pod of the kind of corresponding terminal, and the low speed circuit, is maintaining popularity deep-rooted even now, and is used widely.

[0003]

[Problem(s) to be Solved by the Invention] However, in the real-time chat in which large number of people participate, since two or more subjects in the inside of one window displayed on display are developed, the problem referred to as that a participant tended to miss the flow of conversation arises. Moreover, in a real-time chat, although the language which generally serves as a key for every subject exists, when the language which becomes this key is very long, and a participant needs this, inputting each time is very troublesome.

[0004] this invention was made in view of the actual condition like \*\*\*\*, and the purpose is in offering the real-time chat system which makes the input of the language used as a key easy while a participant makes easy to follow the flow of the conversation currently held by the real-time chat.

[0005]

[Means for Solving the Problem] In the real-time chat system in which invention of a claim 1 has a real-time possible chat by two or more speakers who used information machines and equipment It is characterized by what the utterance information containing the specified keyword is extracted and is displayed on display out of utterance information. Only the conversation relevant to a keyword can be extracted efficiently, a chat participant can hold the flow of the talk easily, and the real-time chat system which a user can concentrate on the chat itself is obtained.

[0006] A concrete information classification from which invention of a claim 2 is characterized by the bird clapper including identification information and contents of an utterance inputted of the utterance candidate from whom the aforementioned utterance information is set as a speaker's identification information and the object of an utterance in invention of a claim 1, and constitutes utterance information is given.

[0007] Invention of a claim 3 is characterized by using a speaker's identification information for the aforementioned keyword in invention of claims 1 or 2, only the conversation relevant to a specification speaker can be extracted efficiently, and the real-time high chat system of convenience is obtained.

[0008] It is characterized by what invention of a claim 4 extracts the utterance information which contains the specified keyword out of utterance information in the real-time chat system in which the real-time chat by two or more speakers who used information machines and equipment in a claim 1, or 3 invention of any one is possible, and is displayed on display, a series of conversation can be extracted efficiently, and the real-time high chat system of convenience is obtained.

[0009] In a claim 1, or 4 invention of any one, invention of a claim 5 displays a speaker's identification information on display, and by choosing the displayed identification information arbitrarily While being characterized by making an input possible by making selected identification information into the aforementioned utterance information and making a chat participant's input easy The mistake of an input and the shake of the notation can be lost and the real-time chat system which can operate it efficiently and correctly is obtained.

[0010] Invention of a claim 6 registers either or the plurality of the high frequency appearance phrase in the extracted utterance information, the homonymy phrase of a high frequency appearance phrase, and the opposite phrase of a high frequency appearance phrase into a dictionary means or a display button in a claim 1, or 5 invention of any one. In case it is characterized by enabling specification of the aforementioned keyword by using this dictionary means or a display button and these phrases are inputted as a keyword, while making the input of a keyword easy The shake of the input mistake of a keyword or the notation can be lost, and the real-time chat system which can operate it efficiently and correctly is obtained.

[0011] Invention of a claim 7 is characterized by being the record medium which memorized the program for operating a claim 1 or a real-time chat system given [ any 1 ] in six and in which computer reading is possible, and the effective means for operating this system easily is offered.

[0012]

[Embodiments of the Invention] By using the real-time chat system by the composition of this invention, it becomes possible to extract and display only a related utterance using the selected user name or the selected keyword, and the flow of conversation becomes intelligible. Moreover, a word with the high frequency of occurrence is detected out of the extracted utterance, the priority of the word in a dictionary is raised, or the input by the button of the character pallet on a screen is enabled. Thereby, the input efficiency of the keyword which occurs frequently in a certain conversation can be raised.

[0013] Hereafter, the example of the real-time chat system by this invention is concretely explained with reference to the appended drawing. the block diagram for drawing 1 explaining one example of the real-time chat system by this invention -- it is -- inside of drawing, 1, and 1' -- a real-time chat equipment (a lot of people remote conversation equipment) client and 1a -- a processor and 1b -- for a character input unit and 1e, a pointing device and 1f of dictionary management equipment and 1g are [ a program storage and 1c / a communication device and 1d / display and 2 ] the servers for conversation equipments Drawing 2 is drawing showing the example of a display in the display screen of the real-time chat system by this invention. 11 among drawing a participant display panel and 11b for the main window and 11a A conversation input panel, 11c -- a conversation display panel and 12 -- a conversation extraction window and 13 -- for a name-of-a-person button and b3, as for an utterance specification button group and b5, a keyword button and b4 are [ a word pallet window and b1 / a former utterance button and b2 / a participant name button group and b6 ] utterance candidate specification buttons

[0014] The window displayed on a screen is constituted by three windows, the main window 11, the conversation extraction window 12, and the word pallet window 13, in drawing 2 . Among these, each window except the conversation extraction window 12 is always displayed. The main window 11 consists of conversation display-panel 11c on which conversation is displayed as participant display-panel 11a which displays a chat participant, and conversation input panel 11b which inputs conversation using a character input unit.

[0015] As shown in drawing 2 , it is displayed on conversation display-panel 11c like the utterance > user name inputted (user name). The name of the user who inputted is automatically displayed on "(user name)" of the portion of this head. Moreover, "> user name" of the last portion displays the specification

of a user made into the object of an utterance in the conversation, and this chooses the participant name of participant display-panel 11a with a pointing device, and it can input it by pushing the utterance candidate specification button b6.

[0016] The conversation extraction window 12 appears, when the word from which a user becomes a key is chosen. In this example, choose a word from (1) utterances and push the keyword button b3 (free keyword extraction). (2) out of the participant name button group b5 of participant display-panel 11a Choose a participant name and an utterance is chosen by specifying one of buttons out of the utterance specification button group b4 which pushes the name-of-a-person button b2 (name-of-a-person extraction) and which is displayed on the head of (3) each utterance. further -- the former utterance button b1 -- pushing (speaking agency search extraction) -- conversation which corresponds by three kinds of said methods is extracted However, the above-mentioned operation is operation in this example, and you may make it add the shortcut function by the keyboard, and the operation function by the cursor key.

[0017] Next, the detail and extraction algorithm of the operation at the time of conversation extraction are explained: Drawing 3 is drawing for explaining an example of the utterance display format in the real-time chat system by this invention. Drawing 4 is drawing for explaining an example of the data format used for the utterance processing extraction processing in the real-time chat system by this invention, the example of an extraction utterance array is shown in drawing 4 (A), and the example of a speaker-utterance candidate array is shown in drawing 4 (B). Drawing 5 is drawing for explaining an example of utterance extraction processing when the former utterance button in the real-time chat system by this invention is pushed. Drawing 6 and drawing 7 are the flow charts for explaining an example of an utterance extraction algorithm when the former utterance button in the real-time chat system by this invention is pushed.

[0018] As an extraction form possible at this example, as mentioned above, three, (1) free keyword extraction, (2) name-of-a-person extraction, and (3) utterance former search extraction, are prepared. Each extraction form is explained in order.

(1) After specifying arbitrary keywords using a mouse from conversation display-panel 11c of the main window 11 in free keyword extraction [operation] drawing 2, only that by which the keyword is contained in utterance information is extracted by pushing the keyword button b3 which extracts a keyword.

[0019] The utterance by which the [processing flow] input was carried out is recorded in the form shown in drawing 3. Here, an utterance number is not displayed on a screen, although a newer utterance has a big value. If a keyword is chosen from conversation display-panel 11c and the keyword button b3 is pushed, while processor 1a shown in drawing 1 will go back from the newest utterance to the utterance of the maximum reference line count quota set up beforehand, an utterance is searched, and if the utterance by which a keyword is contained in either a speaker, the utterance text and an utterance candidate is found, it will register to the extraction utterance array prepared in the utterance information. And the utterance information registered into the extraction utterance array is displayed on the conversation extraction window 12 after all reference ends.

[0020] (2) Since each of the participant name button group b5 currently displayed on participant display-panel 11a in name-of-a-person extraction [operation] drawing 2 functions as a toggle switch, a mouse can perform selection and release. After choosing arbitrary participant name buttons, name-of-a-person reference can be performed by pushing the name-of-a-person button b2.

The participant name by which [processing flow] selection was carried out serves as a keyword. The rest processes like the flow of the above-mentioned free keyword extraction.

[0021] (3) The radio button group (utterance specification button group) b4 is attached to the left-hand side of the utterance currently displayed on the main window 11 in speaking agency search extraction [operation] drawing 2. Among these, the utterance which became the origin of the utterance can be extracted by choosing one of buttons using a mouse and pushing the former utterance button b1.

The flow of the processing which a [operation flow] processor performs is explained with reference to drawing 6. A processor investigates whether the target line is chosen (Step S2), and if the former

utterance button b1 of the main window 11 is pushed first (Step S1), if chosen, the selection line is set as a candidate for reference (Step S3), and if not chosen, it will set the newest line as a candidate for reference (Step S5). Subsequently, a processor registers the utterance number in the set utterance, and a speaker-utterance candidate's group into the speaker-utterance candidate array currently prepared (refer to drawing 4 (B)). When an utterance candidate is plurality at this time, two or more groups will be registered into a speaker-utterance candidate array (step S4).

[0022] And the speaker and utterance candidate of an utterance who were registered into the speaker-utterance candidate array are replaced (Step S6), and it searches, going back the utterance applicable to it (Steps S7, S8, and S10). It registers, when it investigates whether it is already registered in the extraction utterance array for which the utterance is prepared when the corresponding utterance is found (Step S11) and does not register with it. The group is registered into a speaker-utterance candidate array when an utterance candidate is plurality (Step S12). And the data of a speaker-utterance candidate array are changed to the thing of the utterance applicable to reference conditions, it sets, the speaker and utterance candidate of an utterance who set are replaced (Step S6), and it searches by going back further. When it goes back by the maximum reference line count, or when the utterance is already registered into the extraction utterance array, the data group in a speaker-utterance candidate array is deleted (step S9), the following data group in a speaker-utterance candidate array is set (Step S15), and extraction is continued based on this set utterance. And the processing is continued until all the data groups of a speaker-utterance candidate array are deleted, and the utterance finally registered into the extraction utterance array is displayed on a conversation extraction window (Step S14).

[0023] By registering as a button which displays a phrase with the high frequency of occurrence in the conversation information extracted by operation like the above or the synonym phrase of the phrase concerned, and an opposite phrase on the storage region prepared for 1f of dictionary management equipment, or the word pallet window 13 of the display screen For example, in case a high phrase, or its synonym phrase and opposite phrase of the frequency of occurrence are inputted as a keyword, while making the input of a keyword easy, it can be operated efficiently and correctly by the ability losing the shake of the input mistake of a keyword, or the notation. Moreover, 1f of dictionary management equipment can perform more efficient alter operation now by controlling to raise the priority of the phrase registered.

[0024] Next, the operation gestalt is explained below about a means to offer the program used in order to operate the real-time chat system by this invention, and data. This means is offered as a record medium which saved the program and data for operating this above-mentioned real-time chat system. Specifically as a record medium, ROM, a flash memory, a floppy disk, a hard disk, a magneto-optic disk, CD-ROM, etc. can be assumed. And by making it circulate in the form which described above the record medium which recorded a program and data, execution of the function of the equipment concerned is made easy. The function of this real-time chat system can be easily performed by installing such a record medium in information processors, such as a computer, and reading these program and data from a record medium.

[0025]

[Effect of the Invention] The effect of a claim 1: By extracting the utterance information which corresponds based on a specification keyword from input utterance information, and displaying on a display means, only the conversation relevant to a keyword can be extracted efficiently, a chat participant can hold the flow of the talk easily, and the real-time chat system which a user can concentrate on the chat itself is obtained.

[0026] The effect of a claim 2: In addition to the effect of a claim 1, a concrete information classification which constitutes utterance information is given.

[0027] effect [ of a claim 3 ]: -- by extracting the utterance information which corresponds based on a specification speaker's identification information from input utterance information in addition to the effect of claims 1 or 2, and displaying on a display means, only the conversation relevant to a specification speaker can be extracted efficiently, and the real-time high chat system of convenience is obtained

[0028] effect [ of a claim 4 ]: -- based on the identification information of the utterance candidate set as the object of an utterance, by extracting former utterance information from input utterance information, and displaying on a display means, a series of conversation can be extracted efficiently and, in addition to a claim 1, or 3 any 1 effects, the real-time high chat system of convenience is obtained

[0029] effect [ of a claim 5 ]: -- a claim 1, or 4 any 1 effects -- in addition, while making a chat participant's input easy by making an input possible as utterance information only by choosing the identification information of the chat participant shown the table, the mistake of an input and the shake of the notation can be lost and the real-time chat system which can operate it efficiently and correctly is obtained

[0030] In a claim 1, or 5 any 1 effects, The effect of a claim 6 : in addition, by registering a phrase and its synonym phrase with the high frequency of occurrence in the extracted conversation information, and an opposite phrase into a dictionary means or a display button In case these phrases are inputted as a keyword, while making the input of a keyword easy, the shake of the input mistake of a keyword or the notation can be lost, and the real-time chat system which can operate it efficiently and correctly is obtained.

[0031] The effect of a claim 7: The record medium which recorded the program for operating a real-time chat system and in which computer reading is possible is obtained, and the effective means for operating this system easily is offered.

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TECHNICAL FIELD

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[The technical field to which invention belongs] this invention relates to the real-time chat system which connects between information machines and equipment and holds remote conversation by a lot of people.

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PRIOR ART

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## EFFECT OF THE INVENTION

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[Effect of the Invention] The effect of a claim 1: By extracting the utterance information which corresponds based on a specification keyword from input utterance information, and displaying on a display means, only the conversation relevant to a keyword can be extracted efficiently, a chat participant can hold the flow of the talk easily, and the real-time chat system which a user can concentrate on the chat itself is obtained.

[0026] The effect of a claim 2: In addition to the effect of a claim 1, a concrete information classification which constitutes utterance information is given.

[0027] effect [ of a claim 3 ]: -- by extracting the utterance information which corresponds based on a specification speaker's identification information from input utterance information in addition to the effect of claims 1 or 2, and displaying on a display means, only the conversation relevant to a specification speaker can be extracted efficiently, and the real-time high chat system of convenience is obtained

[0028] effect [ of a claim 4 ]: -- based on the identification information of the utterance candidate set as the object of an utterance, by extracting former utterance information from input utterance information, and displaying on a display means, a series of conversation can be extracted efficiently and, in addition to a claim 1, or 3 any 1 effects, the real-time high chat system of convenience is obtained

[0029] effect [ of a claim 5 ]: -- a claim 1, or 4 any 1 effects -- in addition, while making a chat participant's input easy by making an input possible as utterance information only by choosing the identification information of the chat participant shown the table, the mistake of an input and the shake of the notation can be lost and the real-time chat system which can operate it efficiently and correctly is obtained

[0030] effect [ of a claim 6 ]: -- registering a phrase and its synonym phrase with the high frequency of occurrence in the extracted conversation information, and an opposite phrase into a dictionary means or a display button in addition to a claim 1, or 5 any 1 effects In case these phrases are inputted as a keyword, while making the input of a keyword easy, the shake of the input mistake of a keyword or the notation can be lost, and the real-time chat system which can operate it efficiently and correctly is obtained.

[0031] The effect of a claim 7: The record medium which recorded the program for operating a real-time chat system and in which computer reading is possible is obtained, and the effective means for operating this system easily is offered.

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**TECHNICAL PROBLEM**

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[Problem(s) to be Solved by the Invention] However, in the real-time chat in which large number of people participate, since two or more subjects in the inside of one window displayed on display are developed, the problem referred to as that a participant tended to miss the flow of conversation arises. Moreover, in a real-time chat, although the language which generally serves as a key for every subject exists, when the language which becomes this key is very long, and a participant needs this, inputting each time is very troublesome.

[0004] this invention was made in view of the actual condition like \*\*\*\*, and the purpose is in offering the real-time chat system which makes the input of the language used as a key easy while a participant makes easy to follow the flow of the conversation currently held by the real-time chat.

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MEANS

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[Means for Solving the Problem] In the real-time chat system in which invention of a claim 1 has a real-time possible chat by two or more speakers who used information machines and equipment It is characterized by what the utterance information containing the specified keyword is extracted and is displayed on display out of utterance information. Only the conversation relevant to a keyword can be extracted efficiently, a chat participant can hold the flow of the talk easily, and the real-time chat system which a user can concentrate on the chat itself is obtained.

[0006] A concrete information classification from which invention of a claim 2 is characterized by the bird clapper including identification information and content of an utterance inputted of the utterance candidate from whom the aforementioned utterance information is set as a speaker's identification information and the object of an utterance in invention of a claim 1, and constitutes utterance information is given.

[0007] Invention of a claim 3 is characterized by using a speaker's identification information for the aforementioned keyword in invention of claims 1 or 2, only the conversation relevant to a specification speaker can be extracted efficiently, and the real-time high chat system of convenience is obtained.

[0008] It is characterized by what invention of a claim 4 extracts the utterance information which contains the specified keyword out of utterance information in the real-time chat system in which the real-time chat by two or more speakers who used information machines and equipment in a claim 1, or 3 invention of any one is possible, and is displayed on display, a series of conversation can be extracted efficiently, and the real-time high chat system of convenience is obtained.

[0009] In a claim 1, or 4 invention of any one, invention of a claim 5 displays a speaker's identification information on display, and by choosing the displayed identification information arbitrarily While being characterized by making an input possible by making selected identification information into the aforementioned utterance information and making a chat participant's input easy The mistake of an input and the shake of the notation can be lost and the real-time chat system which can operate it efficiently and correctly is obtained.

[0010] Invention of a claim 6 registers either or the plurality of the high frequency appearance phrase in the extracted utterance information, the homonymy phrase of a high frequency appearance phrase, and the opposite phrase of a high frequency appearance phrase into a dictionary means or a display button in a claim 1, or 5 invention of any one. In case it is characterized by enabling specification of the aforementioned keyword by using this dictionary means or a display button and these phrases are inputted as a keyword, while making the input of a keyword easy The shake of the input mistake of a keyword or the notation can be lost, and the real-time chat system which can operate it efficiently and correctly is obtained.

[0011] Invention of a claim 7 is characterized by being the record medium which memorized the program for operating a claim 1 or a real-time chat system given [ any 1 ] in six and in which computer reading is possible, and the effective means for operating this system easily is offered.

[0012]

[Embodiments of the Invention] By using the real-time chat system by the composition of this invention,

it becomes possible to extract and display only a related utterance using the selected user name or the selected keyword, and the flow of conversation becomes intelligible. Moreover, a word with the high frequency of occurrence is detected out of the extracted utterance, the priority of the word in a dictionary is raised, or the input by the button of the character pallet on a screen is enabled. Thereby, the input efficiency of the keyword which occurs frequently in a certain conversation can be raised.

[0013] Hereafter, the example of the real-time chat system by this invention is concretely explained with reference to the appended drawing. the block diagram for drawing 1 explaining one example of the real-time chat system by this invention -- it is -- inside of drawing, 1, and 1' -- a real-time chat equipment (a lot of people remote conversation equipment) client and 1a -- a processor and 1b -- for a character input unit and 1e, a pointing device and 1f of dictionary management equipment and 1g are [ a program storage and 1c / a communication device and 1d / display and 2 ] the servers for conversation equipments Drawing 2 is drawing showing the example of a display in the display screen of the real-time chat system by this invention. 11 among drawing a participant display panel and 11b for the main window and 11a A conversation input panel, 11c -- a conversation display panel and 12 -- a conversation extraction window and 13 -- for a name-of-a-person button and b3, as for an utterance specification button group and b5, a keyword button and b4 are [ a word pallet window and b1 / a former utterance button and b2 / a participant name button group and b6 ] utterance candidate specification buttons

[0014] The window displayed on a screen is constituted by three windows, the main window 11, the conversation extraction window 12, and the word pallet window 13, in drawing 2 . Among these, each window except the conversation extraction window 12 is always displayed. The main window 11 consists of conversation display-panel 11c on which conversation is displayed as participant display-panel 11a which displays a chat participant, and conversation input panel 11b which inputs conversation using a character input unit.

[0015] As shown in drawing 2 , it is displayed on conversation display-panel 11c like the utterance > user name inputted (user name). The name of the user who inputted is automatically displayed on "(user name)" of the portion of this head. Moreover, "> user name" of the last portion displays the specification of a user made into the object of an utterance in the conversation, and this chooses the participant name of participant display-panel 11a with a pointing device, and it can input it by pushing the utterance candidate specification button b6.

[0016] The conversation extraction window 12 appears, when the word from which a user becomes a key is chosen. In this example, choose a word from (1) utterances and push the keyword button b3 (free keyword extraction). (2) out of the participant name button group b5 of participant display-panel 11a Choose a participant name and an utterance is chosen by specifying one of buttons out of the utterance specification button group b4 which pushes the name-of-a-person button b2 (name-of-a-person extraction) and which is displayed on the head of (3) each utterance. further -- the former utterance button b1 -- pushing (speaking agency search extraction) -- conversation which corresponds by three kinds of said methods is extracted However, the above-mentioned operation is operation in this example, and you may make it add the shortcut function by the keyboard, and the operation function by the cursor key.

[0017] Next, the detail and extraction algorithm of the operation at the time of conversation extraction are explained. Drawing 3 is drawing for explaining an example of the utterance display format in the real-time chat system by this invention. Drawing 4 is drawing for explaining an example of the data format used for the utterance processing extraction processing in the real-time chat system by this invention, the example of an extraction utterance array is shown in drawing 4 (A), and the example of a speaker-utterance candidate array is shown in drawing 4 (B). Drawing 5 is drawing for explaining an example of utterance extraction processing when the former utterance button in the real-time chat system by this invention is pushed. Drawing 6 and drawing 7 are the flow charts for explaining an example of an utterance extraction algorithm when the former utterance button in the real-time chat system by this invention is pushed.

[0018] As an extraction form possible at this example, as mentioned above, three, (1) free keyword

extraction, (2) name-of-a-person extraction, and (3) utterance former search extraction, are prepared. Each extraction form is explained in order.

(1) After specifying arbitrary keywords using a mouse from conversation display-panel 11c of the main window 11 in free keyword extraction [operation] drawing 2, only that by which the keyword is contained in utterance information is extracted by pushing the keyword button b3 which extracts a keyword.

[0019] The utterance by which the [processing flow] input was carried out is recorded in the form shown in drawing 3. Here, an utterance number is not displayed on a screen, although a newer utterance has a big value. If a keyword is chosen from conversation display-panel 11c and the keyword button b3 is pushed, while processor 1a shown in drawing 1 will go back from the newest utterance to the utterance of the maximum reference line count quota set up beforehand, an utterance is searched, and if the utterance by which a keyword is contained in either a speaker, the utterance text and an utterance candidate is found, it will register to the extraction utterance array prepared in the utterance information. And the utterance information registered into the extraction utterance array is displayed on the conversation extraction window 12 after all reference ends.

[0020] (2) Since each of the participant name button group b5 currently displayed on participant display-panel 11a in name-of-a-person extraction [operation] drawing 2 functions as a toggle switch, a mouse can perform selection and release. After choosing arbitrary participant name buttons, name-of-a-person reference can be performed by pushing the name-of-a-person button b2.

The participant name by which [processing flow] selection was carried out serves as a keyword. The rest processes like the flow of the above-mentioned free keyword extraction.

[0021] (3) The radio button group (utterance specification button group) b4 is attached to the left-hand side of the utterance currently displayed on the main window 11 in speaking agency search extraction [operation] drawing 2. Among these, the utterance which became the origin of the utterance can be extracted by choosing one of buttons using a mouse and pushing the former utterance button b1.

The flow of the processing which a [operation flow] processor performs is explained with reference to drawing 6. A processor investigates whether the target line is chosen (Step S2), and if the former utterance button b1 of the main window 11 is pushed first (Step S1), if chosen, the selection line is set as a candidate for reference (Step S3), and if not chosen, it will set the newest line as a candidate for reference (Step S5). Subsequently, a processor registers the utterance number in the set utterance, and a speaker-utterance candidate's group into the speaker-utterance candidate array currently prepared (refer to drawing 4 (B)). When an utterance candidate is plurality at this time, two or more groups will be registered into a speaker-utterance candidate array (Step S4).

[0022] And the speaker and utterance candidate of an utterance who were registered into the speaker-utterance candidate array are replaced (Step S6), and it searches, going back the utterance applicable to it (Steps S7, S8, and S10). It registers, when it investigates whether it is already registered in the extraction utterance array for which the utterance is prepared when the corresponding utterance is found (Step S11) and does not register with it. The group is registered into a speaker-utterance candidate array when an utterance candidate is plurality (Step S12). And the data of a speaker-utterance candidate array are changed to the thing of the utterance applicable to reference conditions, it sets, the speaker and utterance candidate of an utterance who set are replaced (Step S6), and it searches by going back further. When it goes back by the maximum reference line count, or when the utterance is already registered into the extraction utterance array, the data group in a speaker-utterance candidate array is deleted (Step S9), the following data group in a speaker-utterance candidate array is set (Step S15), and extraction is continued based on this set utterance. And the processing is continued until all the data groups of a speaker-utterance candidate array are deleted, and the utterance finally registered into the extraction utterance array is displayed on a conversation extraction window (Step S14).

[0023] By registering as a button which displays a phrase with the high frequency of occurrence in the conversation information extracted by operation like the above or the synonym phrase of the phrase concerned, and an opposite phrase on the storage region prepared for 1f of dictionary management equipment, or the word pallet window 13 of the display screen For example, in case a high phrase, or its

synonym phrase and opposite phrase of the frequency of occurrence are inputted as a keyword, while making the input of a keyword easy, it can be operated efficiently and correctly by the ability losing the shake of the input mistake of a keyword, or the notation. Moreover, If of dictionary management equipment can perform more efficient alter operation now by controlling to raise the priority of the phrase registered.

[0024] Next, the operation form is explained below about a means to offer the program used in order to operate the real-time chat system by this invention, and data. This means is offered as a record medium which saved the program and data for operating this above-mentioned real-time chat system.

Specifically as a record medium, ROM, a flash memory, a floppy disk, a hard disk, a magneto-optic disk, CD-ROM, etc. can be assumed. And by making it circulate in the form which described above the record medium which recorded a program and data, execution of the function of the equipment concerned is made easy. The function of this real-time chat system can be easily performed by installing such a record medium in information processors, such as a computer, and reading these program and data from a record medium.

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[Translation done.]



## \* NOTICES \*

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is a block diagram for explaining one example of the real-time chat system by this invention.

[Drawing 2] It is drawing showing the example of a display in the display screen of the real-time chat system by this invention.

[Drawing 3] It is drawing for explaining an example of the utterance display format in the real-time chat system by this invention.

[Drawing 4] It is drawing for explaining an example of the data format used for the utterance processing extraction processing in the real-time chat system by this invention.

[Drawing 5] It is drawing for explaining an example of utterance extraction processing when the speaking agency button in the real-time chat system by this invention is pushed.

[Drawing 6] It is a flow chart for explaining an example of an utterance extraction algorithm when the dialog button in the real-time chat system by this invention is pushed.

[Drawing 7] It is a flow chart for explaining an example of an utterance extraction algorithm when the dialog button in the real-time chat system by this invention is pushed.

[Description of Notations]

1 1' -- Real-time chat equipment (a lot of people remote conversation equipment) client, 1a [ -- A communication device, 1d / -- Character input unit, ] -- A processor, 1b -- A program storage, 1c 1e [ -- Display, ] -- A pointing device, 1f -- Dictionary management equipment, 1g 2 [ -- Participant display panel, ] -- The server for conversation equipments, 11 -- The main window, 11a 11b [ -- Conversation extraction window, ] -- A conversation input panel, 11c -- A conversation display panel, 12 13 [ -- A name-of-a-person button, b3 / -- A keyword button, b4 / -- An utterance specification button group, b5 / -- A participant name button group, b6 / -- Utterance candidate specification button. ] -- A word pallet window, b1 -- A former utterance button, b2

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## DRAWINGS

[Drawing 3]

発言表示形式

発言番号	発言者	発言本文	発言対象者
45	Aさん	どこの番区者ですか	>Cさん

再発言対象者の表記法

複数のユーザーを指定するとき “Aさん,Bさん” のように “,” で区切る  
参加者全員に対する発言 発言対象者を指定しないまたは “全員” と表記

[Drawing 4]

発言抽出用データ形式

(A) 抽出発言配列

抽出番号	発言番号
1	48
2	42
3	35
4	34

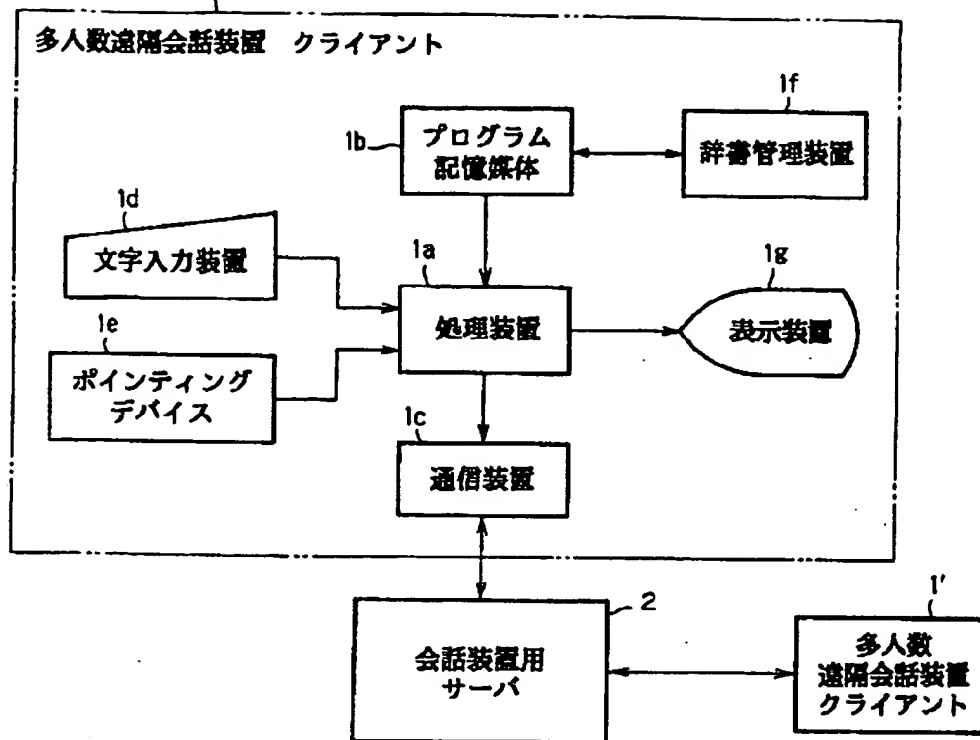
⋮  
⋮  
⋮

(B) 発言者－発言対象者配列

発言者	発言対象者	発言番号
Aさん	Bさん	48
Bさん	Cさん	35

⋮  
⋮  
⋮

[Drawing 1]



[Drawing 5]

元発言ボタンを押したときの抽出処理

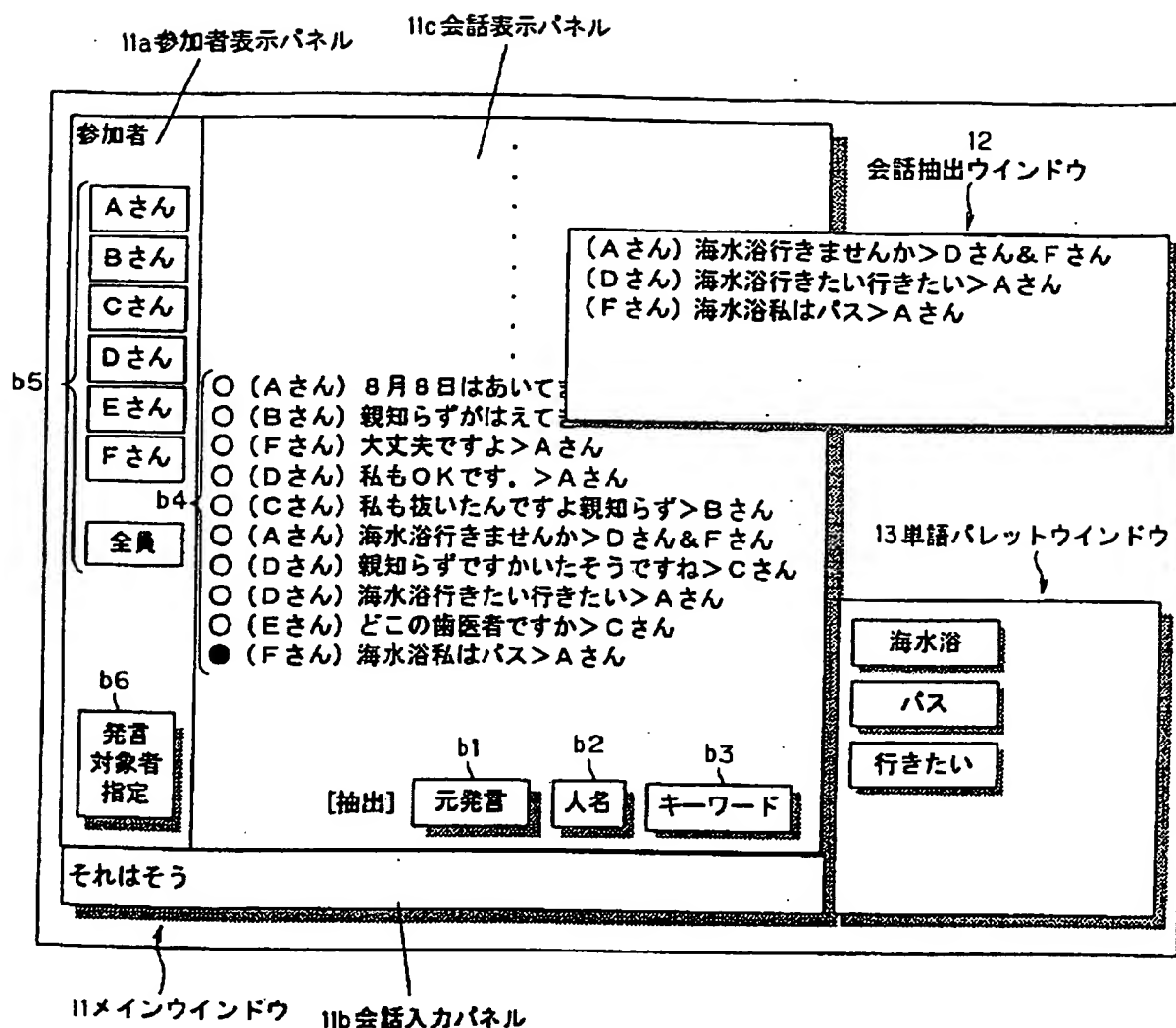
- 1 (Aさん) 8月8日はあいてますか?>全員
- 2 (Bさん) 親知らずがはえてきてしまって>Cさん
- 3 (Fさん) 大丈夫ですよ>Aさん
- 4 (Dさん) 私もOKです。>Aさん
- 5 (Cさん) 私も抜いたんですよ親知らず>Bさん
- 6 (Aさん) 海水浴行きませんか>Dさん&Fさん
- 7 (Dさん) 親知らずですかいたそうですね>Cさん
- 8 (Dさん) 海水浴行きたい行きたい>Aさん
- 9 (Eさん) どの歯医者ですか>Cさん
- 10 (Fさん) 海水浴私はバス>Aさん

抽出結果

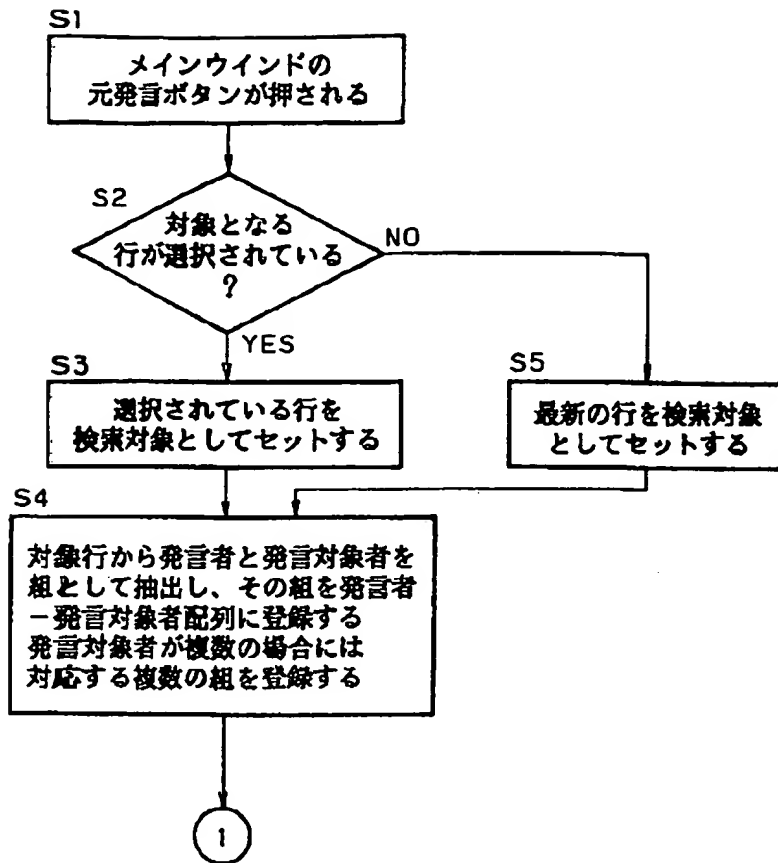
- 1 (Aさん) 8月8日はあいてますか?>全員
- 3 (Fさん) 大丈夫ですよ>Aさん
- 4 (Dさん) 私もOKです。>Aさん
- 6 (Aさん) 海水浴行きませんか>Dさん&Fさん
- 10 (Fさん) 海水浴私はバス>Aさん

※数字が大きい図新しい発言

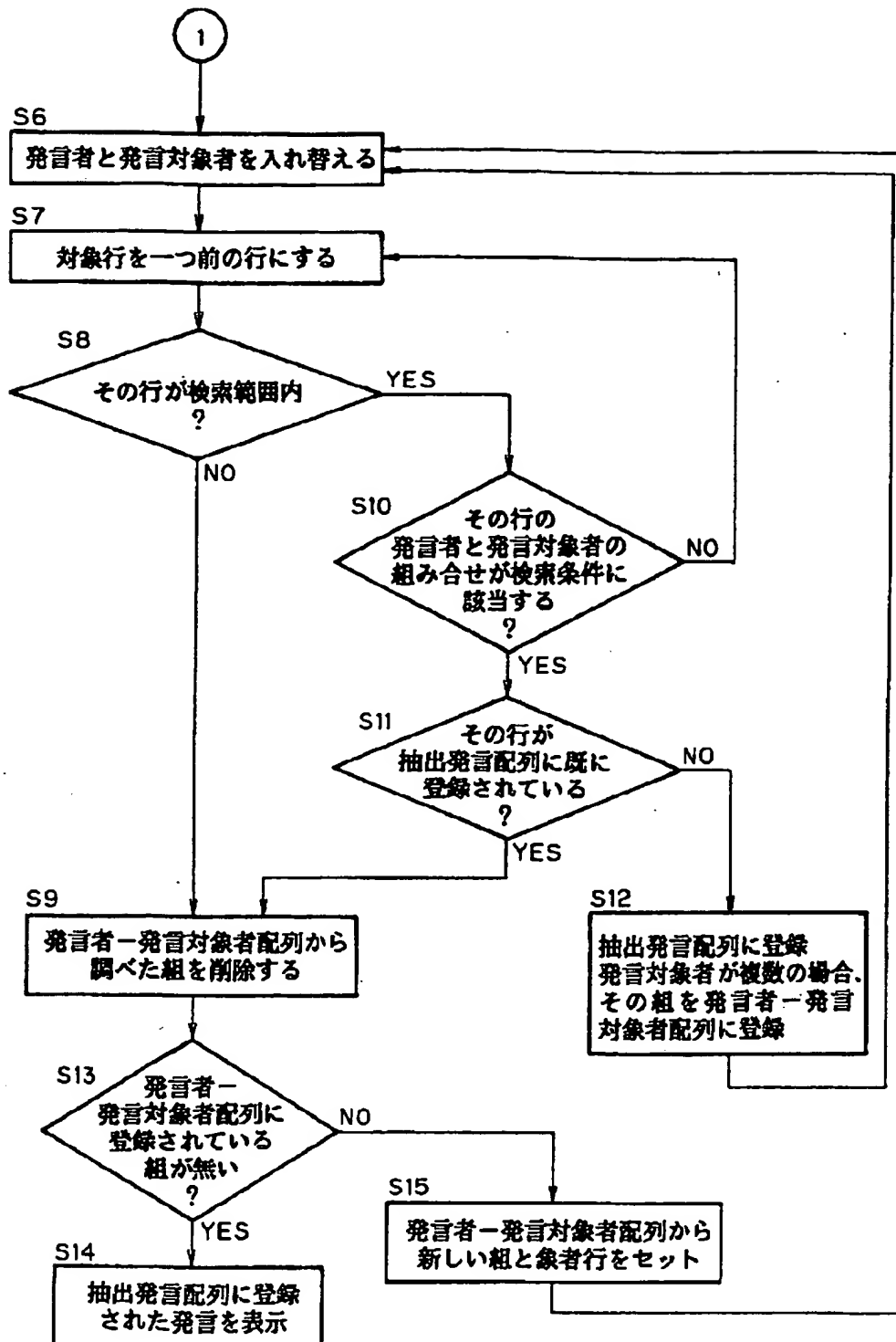
[Drawing 2]



[Drawing 6]



[Drawing 7]



[Translation done.]